

Work Order ID 58813



Page 1

Wednesday, May 19, 2010 9:27:01 AM

Item ID:	D350-636-014	Accept		Setup	Start	
Revision ID:						
Item Name:	Skidtube RH				Stop	
Start Date:	5/19/2010	Start Qty: 1.00		Cust Item ID:		
Required Date:	5/26/2010	Req'd Qty: 1.00		Customer:		
Reference:						

Approvals:	Process Plan:		Date:	10-5-19	Tooling:		Date:		Run	Start	
	QC:		Date:		SPC (Y/N):		Date:			Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D2750	Rev F

100		0.00	
	DOCUMENT CONTROL		
DC	Memo	0.00	
Document Control	Photocopy blue file and type labels per PPP D350-636-014 CHG 005		

8 10/06/11

HJ for BG 10/06/11

B 58813

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

110

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1- Mark cut line on aft end of D2600-3-Bent using Jig DT 8150. Cut to length as per Dwg D2750. Deburr end

2-Drill pilot holes as per Dwg D2750 sheet 7 (D2750-4 details).Drill using drill Jig DT8150 & DT8864 .

3- Mark fwd end for cutting using Drill Jig DT 8150 & DT8864 and cut as per dwg D2750. Deburr.

4- Drill fwd step holes using DT9616. Ensure proper positioning.

5-Drill pilot holes for blade fitting bolt using DT8983. Open to 0.500".

6- locate DT8929 off of blade fitting holes and drill pilot holes for blade fitting.

7-Open up holes for section BE-BE to 0.375 (2 holes per side) and blade fitting location holes to 0.500" (total of 4 holes per side) as per dwg D2750. Open holes for ground handling and detail A-B to 0.500" (8 holes per side)

8-Drill pilot holes for wearplates as per Dwg D2750 using DT8108 and open to 0.297"

9-Open up holes of Detail A-A to 0.297" (total of 2 holes per side)

10-Weld D2744 Cap as per Dwg D2750 and QSI 004.Fill grooves in bend left from bending as per QSI 004

A/R ☐ ☐ Aluminum Rod☐ M112860

BE 10/06/02

M 10/06/01

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Stop



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--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

11-Grind welds flush as per Dwg D2750

12- scribe batch #.

11 101612

120



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

Memo

0.00

8106662

130



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

8106662

(H)

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QC: _____

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Date: _____

Stop

Sequence ID/
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DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

140

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

1 H 10/06/02

150

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

10-6-2

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Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160

0.00



Skidtubes

Skidtubes

0.00

Memo

1-Open up holes section BE-BE 0.500" (4 per side) as per dwg D2750

2-Open holes section BC-BC 0.3125" (4 per side)

3-Open up holes of Detail AB and ground handling to 0.625" (total of 8 holes per side) as per dwg D2750.

4-Chamfer holes of section BE-BE, BC-BC, AB and ground handling (welding instructions on sheet 11)

5-Deburr and blow out all chips from inside of tube. Prepare tube for welding, remove alodine as required.

6-Bond web D2739 in place as per QSI 015

A/R ☐ ☐ ☐ Sikaflex-291 batch: 10435 ☐ ☐ ☐
exp. date: 11/1/20

7- Weld spacers D3490-1, D3490-5 and D2743 as per dwg D2750 & QSI004 (welding instructions on sheet 11)

A/R ☐ ☐ ☐ Aluminum Rod batch: M114242 BE 10/06/03

8-Grind welds flush as per Dwg D2750

9-Spot face ground handling holes (total of 4 places per side) as per dwg D2750

10-Deburr holes

11/06/02

BE 10/06/04

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Run Start



Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

170

QC10- Inspect visual per QSI004- ground welds

0.00

S 10/6/04



QC

Memo

0.00

Quality Control

180

QC5- Inspect part completeness to step on W/O

0.00

S 10/6/04



QC

Memo

0.00

Quality Control

190

Pressure Wash per QSI005 4.3

0.00



HandFinish

Memo

0.00

Hand Finishing

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

DB 10-6-8.

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Run Start



Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

200

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



M114841

=> M. 10/06/08

Powdercoat

Memo

0.00

1 0

Powder Coating

START TIME: 2:00pm
OVEN TEMPERATURE: 320°f
FINISH TIME: 2:20pm

210

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

M. 10 06 10 (1)

Quality Control

Inspect for foreign object per QSI 024

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230	HandFinishing	0.00							
	HandFinish								
Hand Finishing	Memo	0.00							
	1-Install inserts as per dwg D2750								
	2-assemble o'ring as per dwg D3492 and apply o'ring lube A/R 55-o'ring lube batch: <u>114189</u>								
	3-Assemble tube hardware as per dwg D2750 sikaflex batch: <u>113435</u>								
	4-Inspect For Foreign Objects								
	5-Spray inside of tube with "LPS-3" batch: <u>N/A</u> <u>MM 10 06 10</u>								
	6-Install blade fitting D3488-041, wearshoe SIKA FLEX 241 BATCH: <u>113435</u> EXP DATE: <u>10/11</u>								
	7-assemble o'ring to plug as per dwg D3492 and apply o'ring lube A/R 55-o'ring lube batch: <u>114189</u>								
	8-Coat all exposed fasteners with "LPS Procyon" batch: <u>104251</u>								

ml 10 06 10 ①

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

270

0.00



Packaging

Packaging

Memo

0.00

Packaging

Package as per PPP D350-636-014

NAVI. H

280

0.00



QC

QC21- Final Inspection - Work Order Release

Memo

0.00

Quality Control

MF
10-6-16

W/O:		WORK ORDER CHANGES					
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Picklist Print

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Page 1
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Work Order ID: 58813

Parent Item: D350-636-014

Parent Item Name: Skidtube RH

Comments: IPP Rev:H 02.09.25 Rearranged procedure steps KJ
IPP Rev:I 05.12.08 Rearranged procedure steps EC
IPP Rev:J 06.03.30 Per rev. D EC
IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By:EC

Start Date: 5/19/2010

Required Date: 5/26/2010

Start Qty: 1.00

Required Qty: 1.00

D2600-3-BENT

Manufactured No

110

Each

2.0000

1



Extrusion Bent

B 58903 D 11/10/06/01

Location

Loc Qty

Loc Code

LG

2

55462

1

57538

1

D2739

Manufactured No

160

Each

1.0000

1



350 I Beam

B 58904 1 11/12/06/02

Location

Loc Qty

Loc Code

LG

1

57948

1

D2743

Manufactured No

160

Each

114.0000

8



Crossbolt Spacer

Location

Loc Qty

Loc Code

LG

114

50281

10

52310

24

57953

80

D2744

Manufactured No

160

Each

28.0000

1



Cap

Location

Loc Qty

Loc Code

LG

28

47488

10

51922

18

B 8 8E 10/06/03

1 11/16/06/08

W/O:		WORK ORDER CHANGES					
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IPP Rev:J 06.03.30 Per rev. D EC
IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By:EC

Start Qty: 1.00

Required Qty: 1.00

D3490-1 Manufactured No 160 Each 25.0000 4



Cross Bolt Spacer

Location

Loc Qty

Loc Code

LG

25

57723

25

D3490-5 Manufactured No 160 Each 46.0000 4



Cross Bolt Spacer

Location

Loc Qty

Loc Code

LG

46

43015

6

46490

40

ALS4-1032-225 Purchased No 230 Each 7,062.000 38



Insert

Location

Loc Qty

Loc Code

PK011

7062

110768

7062

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IPP Rev:J ☐ 06.03.30 ☐ Per rev. D ☐ EC ☐
IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By:EC

Start Qty: 1.00

Required Qty: 1.00

AN3C5A Purchased No 230 Each 453.0000 34



Bolt



B#114808

Location	Loc Qty	Loc Code
ST350	325	
114330	125	
114523	200	
ST351	128	
113121	10	
114108	45	
114181	73	

mm 10.06.10

AN3C6A Purchased No 230 Each 565.0000 4



BOLT



Location	Loc Qty	Loc Code
ST351	565	
<u>111982</u>	565	

mm 10.06.10

AN6C44A Purchased No 230 Each 101.0000 4



BOLT



Location	Loc Qty	Loc Code
FG	2	
103964	2	
ST344	99	
111649	2	
114455	47	
<u>114653</u>	50	

mm 10.06.10

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Start Qty: 1.00

Required Qty: 1.00

AN8C35A Purchased No 230 Each 56.0000 1
 BOLT

Location Loc Qty Loc Code

FP 6
 110847 6
 ST346 50
 114442 50

Purchased No 230 Each 0.0000 38
 B# 114341

washer
 AN960C816L Purchased No 230 Each 106.0000 1
 WASHER

Location Loc Qty Loc Code

ST348 106
 110584 100
 111424 6

D2745 Manufactured No 230 Each 146.0000 8
 Bushing

Location Loc Qty Loc Code

ST023 146
 52311 69
 57914 77

MM 10.06.10

MM 10.06.10

MM 10.06.10

MM 10.06.10

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IPP Rev:I 05.12.08 Rearranged procedure steps EC
IPP Rev:J 06.03.30 Per rev. D EC
IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By:EC

Start Qty: 1.00

Required Qty: 1.00

D3488-042 Manufactured No 230 Each 19.0000 1



Blade Fitting Assembly, RH

Location Loc Qty Loc Code

FP008 19

53918 19

D3492-1 Manufactured No 230 Each 58.0000 8



Plug

Location Loc Qty Loc Code

FP 58

47658 24

48274 34

replaces D3492-041

D3492-5 Manufactured No 230 Each 39.0000 8



Plug

Location Loc Qty Loc Code

FP 39

47659 39

replaces D3492-045

D3535-25 Manufactured No 230 Each 13.0000 1



Wearshoe

Location Loc Qty Loc Code

FP18 13

57943 13

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Page 5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 6

Work Order ID: 58813

Parent Item: D350-636-014

Parent Item Name: Skidtube RH

Comments: IPP Rev:H 02.09.25 Rearranged procedure steps KJ
IPP Rev:I 05.12.08 Rearranged procedure steps EC
IPP Rev:J 06.03.30 Per rev. D EC
IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By:EC

Start Date: 5/19/2010

Required Date: 5/26/2010

Start Qty: 1.00

Required Qty: 1.00

D3536-25 Manufactured No 230 Each 6.0000 1
Gasket

B# 58820

Location	Loc Qty	Loc Code
FP12	6	
57944	6	

MM 10.06.10

D3537-1 Manufactured No 230 Each 24.0000 3
Wearpad

B# 58178

Location	Loc Qty	Loc Code
FP	1	
55465	1	
FP17	23	
57256	23	

MM 10.06.10

D3631-1 Manufactured No 230 Each 206.0000 8
Washer

B# 54388

Location	Loc Qty	Loc Code
ST076	206	
52693	206	

MM 10.06.10

D3672-1 Manufactured No 230 Each 1,375.000 4
Phenolic Washer

Location	Loc Qty	Loc Code
ST077	1375	
<u>51674</u>	375	
52505	1000	

MM 10.06.10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 7

Work Order ID: 58813

Parent Item: D350-636-014

Parent Item Name: Skidtube RH

Comments: IPP Rev:H 02.09.25 Rearranged procedure steps KJ
IPP Rev:I 05.12.08 Rearranged procedure steps EC
IPP Rev:J 06.03.30 Per rev. D EC
IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By:EC

Start Date: 5/19/2010

Required Date: 5/26/2010

Start Qty: 1.00

Required Qty: 1.00

D3791-1 Manufactured No 230 Each 5.0000 1



Wearplate

B#58906

Location Loc Qty Loc Code

FP17 5

56299 5

D3793-1 Manufactured No 230 Each 10.0000 1



Wearshoe

B#59151

Location Loc Qty Loc Code

FP18 10

56300 1

57945 9

D3793-3 Manufactured No 230 Each 11.0000 1



Wearshoe

B#59152

Location Loc Qty Loc Code

FP19 11

57947 11

D3794-1 Manufactured No 230 Each 32.0000 1



Gasket

Location Loc Qty Loc Code

FP010 26

57942 26

FP014 6

57537 6

mm 10.08.10

mm 10.08.10

mm 10.08.10

mm 10.08.10

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W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 8

Work Order ID: 58813

Parent Item: D350-636-014

Parent Item Name: Skidtube RH

Comments: IPP Rev:H 02.09.25 Rearranged procedure steps KJ
 IPP Rev:I 05.12.08 Rearranged procedure steps EC
 IPP Rev:J 06.03.30 Per rev. D EC
 IPP Rev:L 07-07-28 Added SS Wearplates (Rev E) JLM Verified By:EC

Start Date: 5/19/2010

Required Date: 5/26/2010

Start Qty: 1.00

Required Qty: 1.00

D3794-3 Manufactured No 230 Each 14.0000 1
 Gasket

B# SA153

Location	Loc Qty	Loc Code
FP18	14	
56066	14	

MM 10.06.10

MS21043-6 Purchased No 230 Each 826.0000 4
 NUT

Location	Loc Qty	Loc Code
ST301	826	
112314	826	

MM 10.06.10

MS21083C8 Purchased No 230 Each 41.0000 1
 NUT

Location	Loc Qty	Loc Code
ST303	41	
113845	11	
114523	30	

MM 10.06.10

NAS1611-005 Purchased No 230 Each 309.0000 1
 O-RING

Location	Loc Qty	Loc Code
FP002	309	
106099	209	
114220	100	

MM 10.06.10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 9

Work Order ID: 58813

Parent Item: D350-636-014

Parent Item Name: Skidtube RH

Comments: IPP Rev:H 02.09.25 Rearranged procedure steps KJ
IPP Rev:I 05.12.08 Rearranged procedure steps EC
IPP Rev:J 06.03.30 Per rev. D EC
IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By:EC

Start Date: 5/19/2010

Required Date: 5/26/2010

Start Qty: 1.00

Required Qty: 1.00

NAS1611-010

Purchased

No

230

Each

306.0000

1



O-RING

Location

Loc Qty

Loc Code

FP

306

110715

100

110915

230

206

250

Each

113.0000

2

AN8C21A

Purchased

No



BOLT

Location

Loc Qty

Loc Code

ST345

113

111605

23

113558

50

114653

40

AN960C816L

Purchased

No

250

Each

106.0000

1



WASHER

Location

Loc Qty

Loc Code

ST348

106

110584

100

111424

6

D2741

Manufactured

No

250

Each

28.0000

1



Blade, 350 Skidtube

Location

Loc Qty

Loc Code

ST466

28

55905

28

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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Work Order ID: 58813



Parent Item: D350-636-014



Parent Item Name: Skidtube RH

Start Date: 5/19/2010

Required Date: 5/26/2010

Comments: IPP Rev:H 02.09.25 Rearranged procedure steps KJ
 IPP Rev:I 05.12.08 Rearranged procedure steps EC
 IPP Rev:J 06.03.30 Per rev. D EC
 IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By:EC

Start Qty: 1.00

Required Qty: 1.00

D3493-1

Manufactured No

250

Each

33.0000

2



Washer



10-10-6-115

Location

Loc Qty

Loc Code

ST065

33

57825

33

D3672-13

Purchased No

250

Each

894.0000

2



Phenolic Washer



10-6-115

Location

Loc Qty

Loc Code

ST077

894

54363

894

MS21083C8

Purchased No

250

Each

41.0000

1



NUT



2
MIRAZ 10-6-115

Location

Loc Qty

Loc Code

ST303

41

113845

11

114523

30

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X		D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1		D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

GENERAL NOTES:

- MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- FINISH:
ACID ETCH, ALONDE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: N/A
- IDENTIFICATION: N/A
- WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- WELD PER DART QSI 004
- INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES ($\phi 0.297$) FOR WEARSHOE INSERTS
- FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS.
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY. CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER.
- SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

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WITHOUT NOTICE
WORK ORDER
NO. 58813
88-05-19

RELEASED

F	INCORPORATE DSI 9413; QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/-3 REPLACES D3535-13/-35 (ZN C8-1); D3794-1/-3 REPLACES D3536-13/-35 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL). WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS; CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H8L; REMOVE D2741; QTY (2) AN960C616; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEC 9133/9157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S293 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN	PC	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
DRAWN	REH		
CHECKED		DRAWING NO.	REV. F
MFG. APPR.	AS	D2750	SHEET 1 OF 11
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
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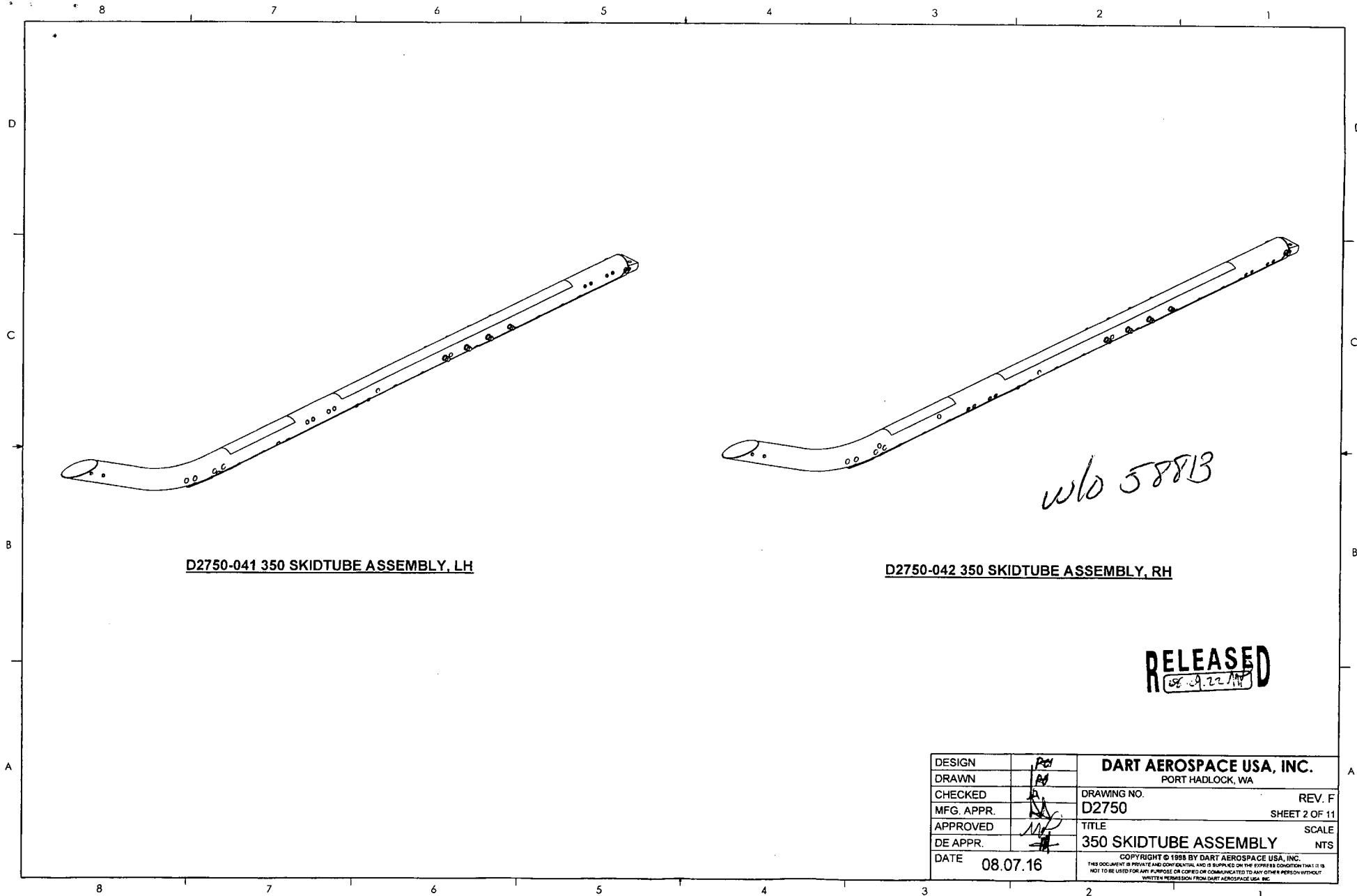
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D2750-041 350 SKIDTUBE ASSEMBLY, LH

D2750-042 350 SKIDTUBE ASSEMBLY, RH

w/o 58813

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08-09-22-14

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MFG. APPR.	MA	D2750	SHEET 2 OF 11
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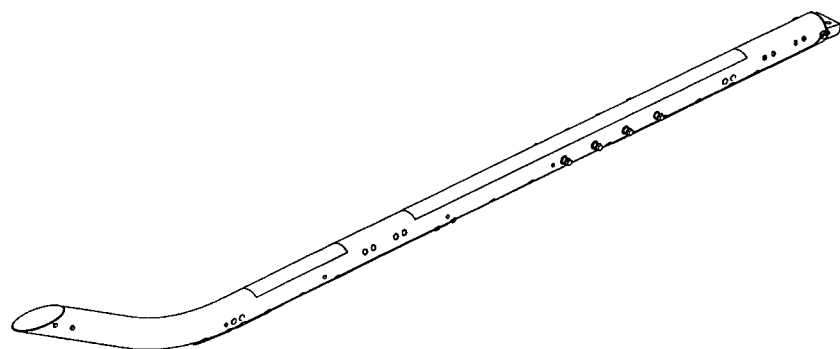
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

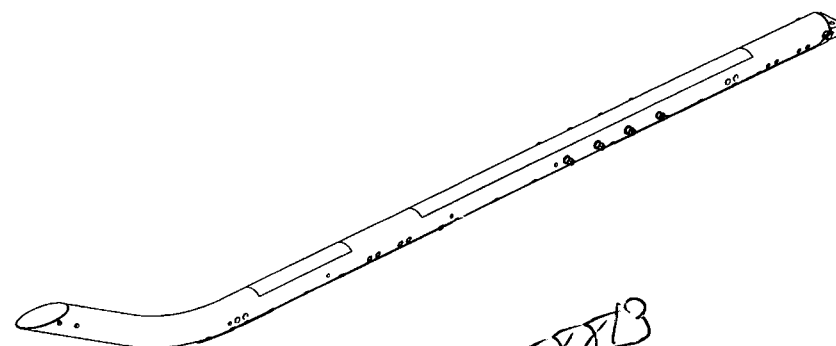
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D2750-043 350 SKIDTUBE ASSEMBLY, LH



D2750-044 350 SKIDTUBE ASSEMBLY, RH

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68-09-22/177

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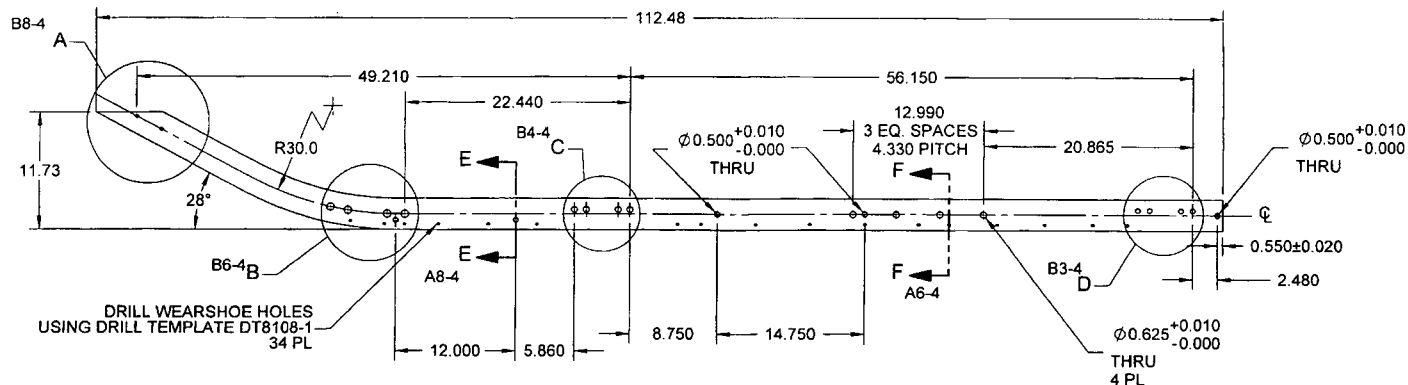
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

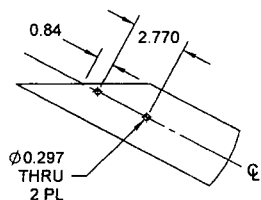
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

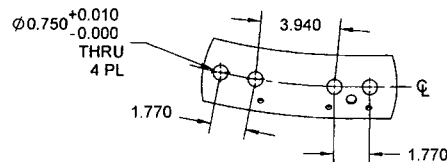
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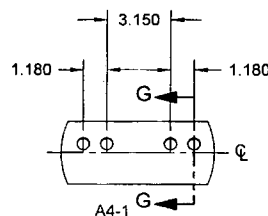
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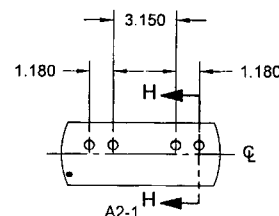
DETAIL A
SCALE 2X



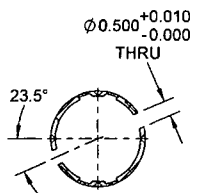
DETAIL B
SCALE 2X



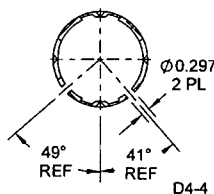
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SCALE 2X



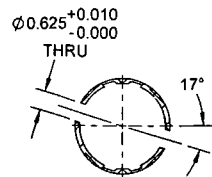
DETAIL D
SCALE 2X



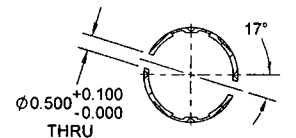
SECTION E-E
SCALE 3X, 2 PL



SECTION F-F
SCALE 3X, 17 PL



SECTION G-G
SCALE 3X, 4 PL



SECTION H-H
SCALE 3X, 4 PL

w/o 58813

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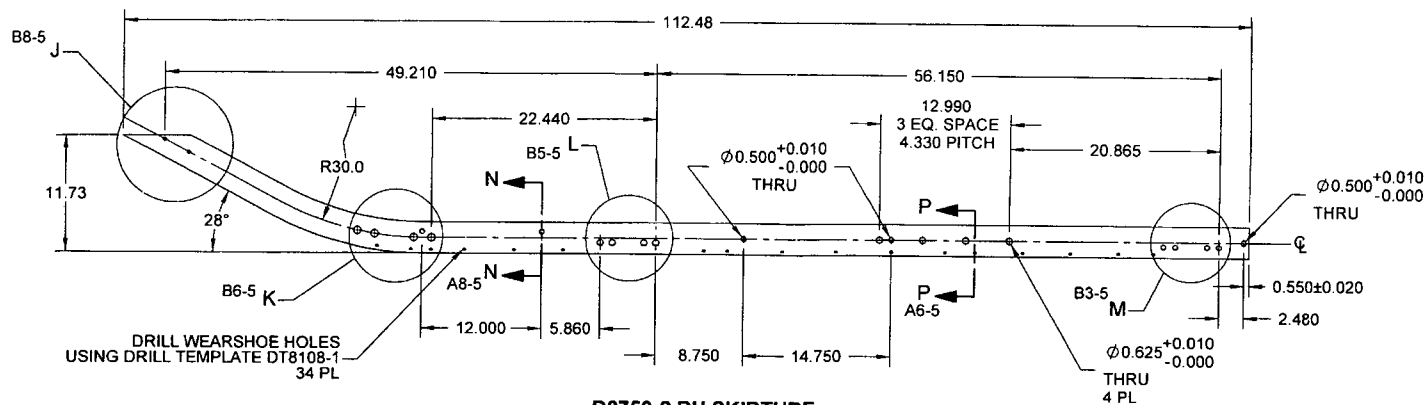
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

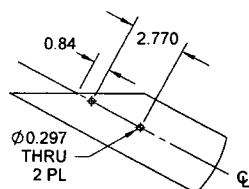
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

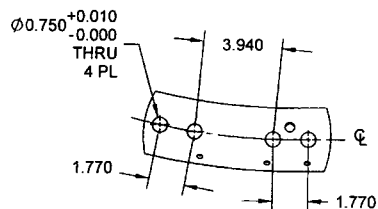
NOTE: Date & initial all entries



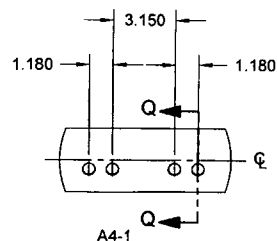
D2750-2 RH SKIDTUBE



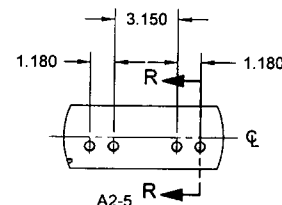
DETAIL J
SCALE 2X



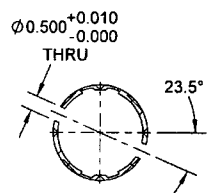
DETAIL K
SCALE 2X



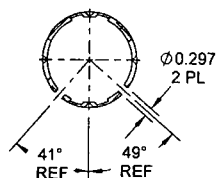
DETAIL L
SCALE 2X



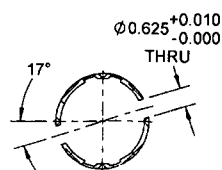
DETAIL M
SCALE 2X



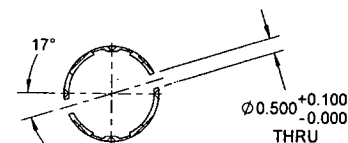
SECTION N-N
SCALE 3X, 2 PL



SECTION P-P
SCALE 3X, 17 PL



SECTION Q-Q
SCALE 3X, 4 PL



SECTION R-R
SCALE 3X, 4 PL

W/058813

RELEASED

DESIGN	REV	DART AEROSPACE USA, INC.
DRAWN	REV	PORT HADLOCK, WA
CHECKED		DRAWING NO. D2750
MFG. APPR.		REV. F
APPROVED		SHEET 5 OF 11
DE APPR.		TITLE 350 SKIDTUBE ASSEMBLY
DATE 08.07.16		SCALE NTS

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8

7

6

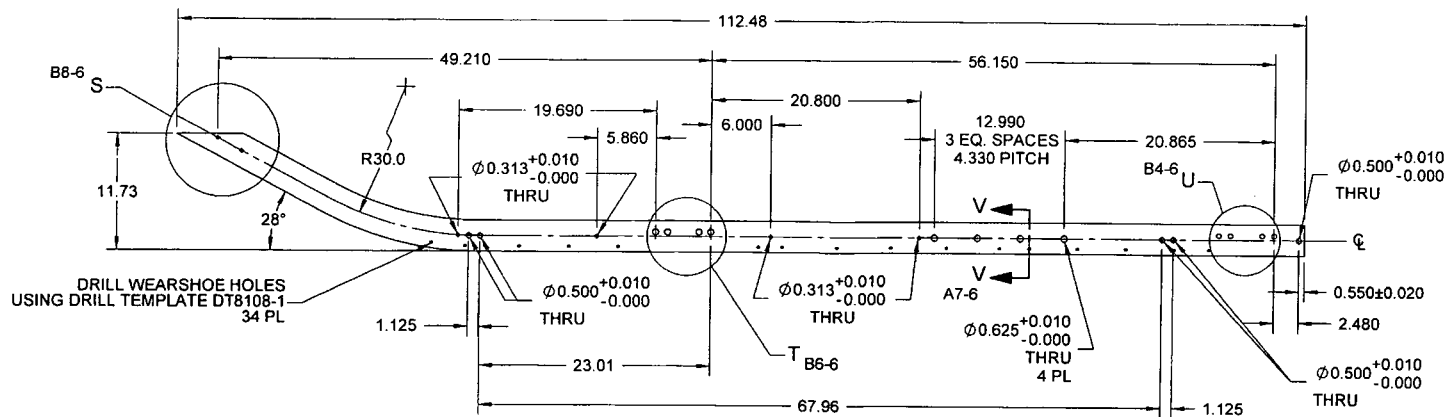
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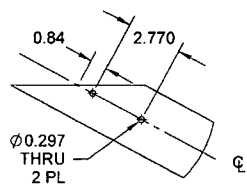
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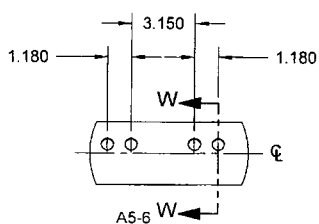
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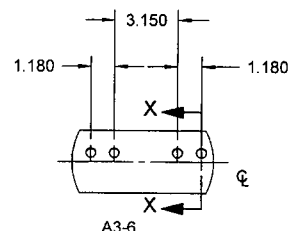
D2750-3 LH SKIDTUBE



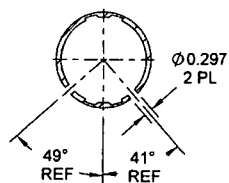
DETAIL S
D8-6
SCALE 2X



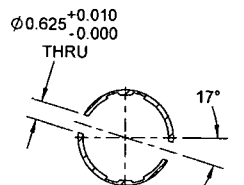
DETAIL T
C5-6
SCALE 2X



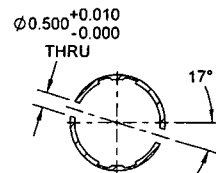
DETAIL U
D3-6
SCALE 2X



SECTION V-V
C4-6
SCALE 3X, 17 PL



SECTION W-W
B6-6
SCALE 3X, 4 PL



SECTION X-X
B4-6
SCALE 3X, 4 PL

w/o 58813

RELEASED

DESIGN		DART AEROSPACE USA, INC.
DRAWN		PORT HADLOCK, WA
CHECKED		DRAWING NO. D2750
MFG. APPR.		REV. F
APPROVED		SHEET 6 OF 11
DE APPR.		TITLE 350 SKIDTUBE ASSEMBLY
DATE	08.07.16	SCALE NTS

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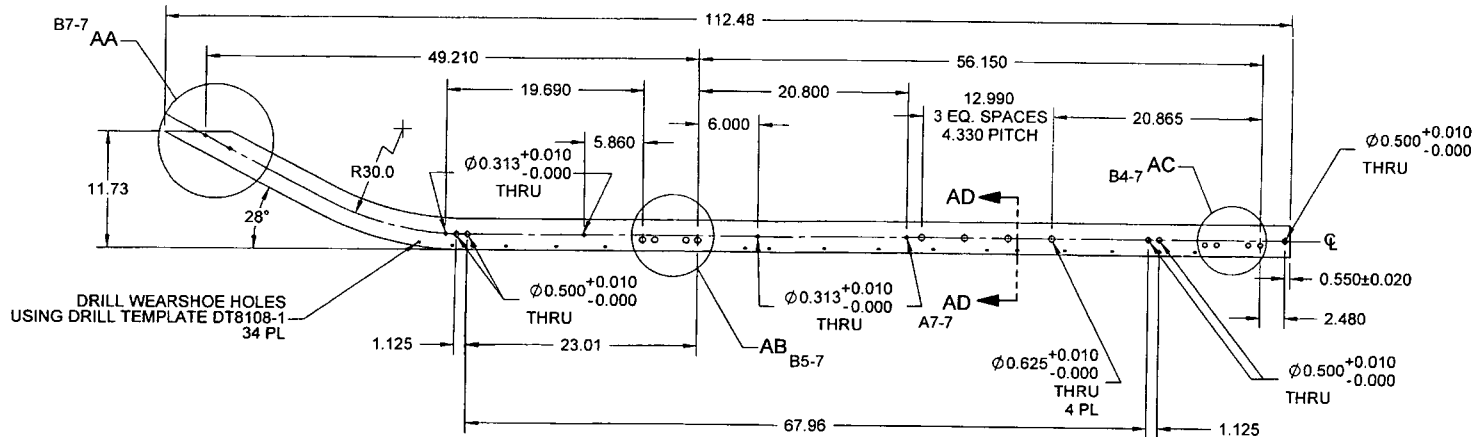
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

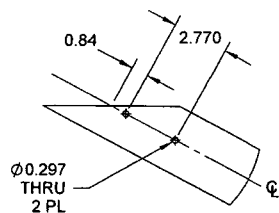
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

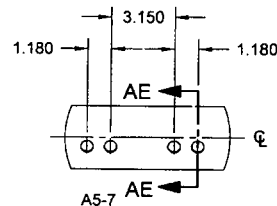
NOTE: Date & initial all entries



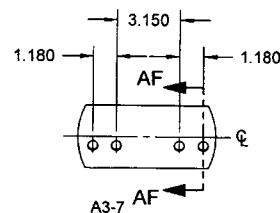
D2750-4 RH SKIDTUBE



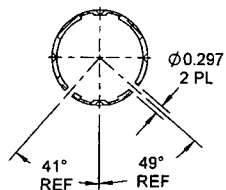
DETAIL AA
SCALE 2X



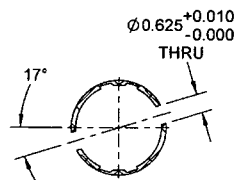
DETAIL AB
SCALE 2X



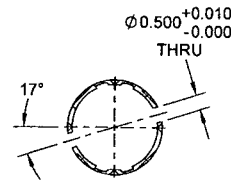
DETAIL AC
SCALE 2X



SECTION AD-AD
SCALE 3X, 17 PL



SECTION AE-AE
SCALE 3X, 4 PL



SECTION AF-AF
SCALE 3X, 4 PL

w/o 58813

RELEASED

DESIGN	PA	DART AEROSPACE USA, INC.	
DRAWN	PA	PORT HADLOCK, WA	
CHECKED	PA	DRAWING NO.	REV. F
MFG. APPR.	PA	D2750	SHEET 7 OF 11
APPROVED	PA	TITLE	SCALE
DE APPR.	PA	350 SKIDTUBE ASSEMBLY	NTS
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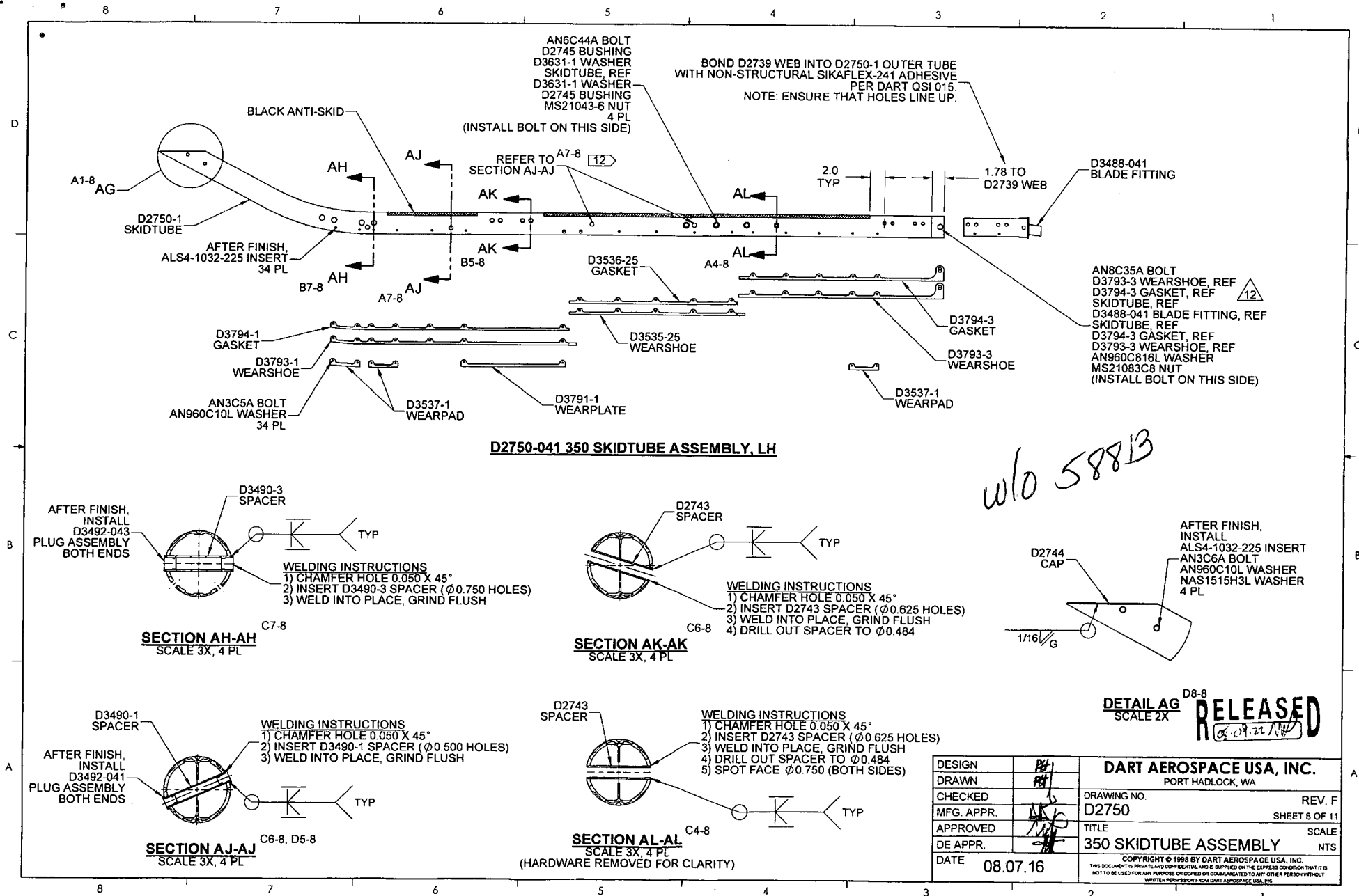
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

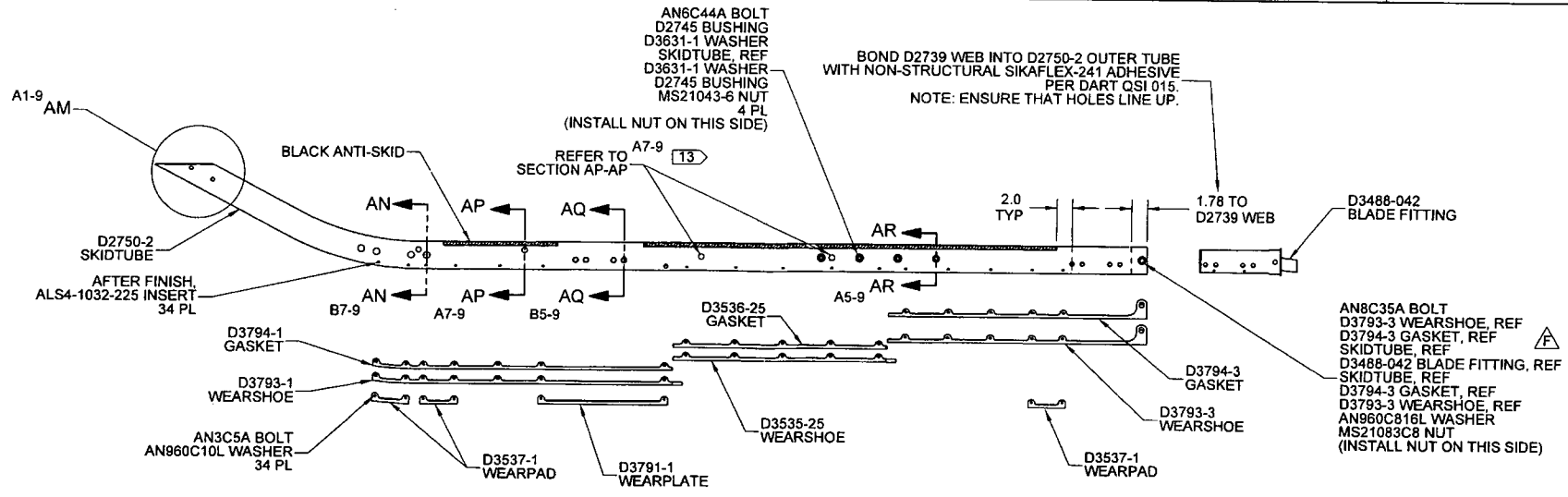
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

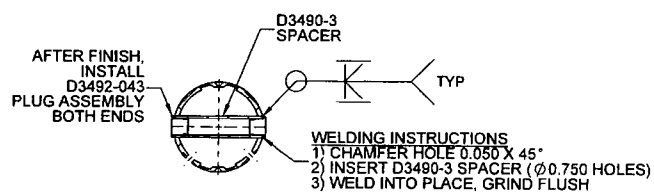
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

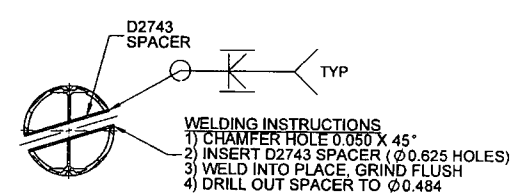
8 7 6 5 4 3 2 1



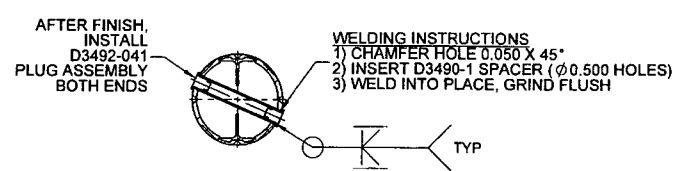
D2750-042 350 SKIDTUBE ASSEMBLY, RH



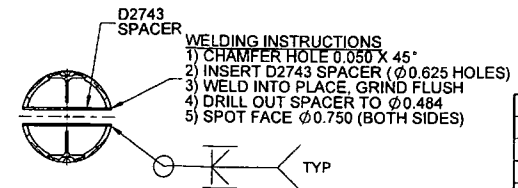
SECTION AN-AN
SCALE 3X, 4 PL



SECTION AQ-AQ
SCALE 3X, 4 PL

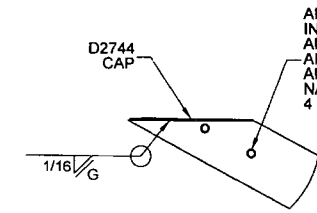


SECTION AP-AP
SCALE 3X, 4 PL



SECTION AR-AR
SCALE 3X, 4 PL
(HARDWARE REMOVED FOR CLARITY)

Wb 58813



DETAIL AM
SCALE 2X

RELEASED
08-09-22-13

DESIGN		DART AEROSPACE USA, INC.	
DRAWN		PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2750	SHEET 9 OF 11
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W/O:		WORK ORDER CHANGES					
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

A1-10
AS

BLACK ANTI-SKID
REFER TO
SECTION AW-AW

A4-10

AN8C44A BOLT
D2745 BUSHING
D3631-1 WASHER
SKIDTUBE, REF
D3631-1 WASHER
D2745 BUSHING
MS21043-6 NUT
4 PL
(INSTALL BOLT ON THIS SIDE)

BOND D2739 WEB INTO D2750-3 OUTER TUBE
WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE
PER DART QSI 015.
NOTE: ENSURE THAT HOLES LINE UP.

D3488-041
BLADE FITTING

D2750-3
SKIDTUBE

AFTER FINISH,
ALS4-1032-225 INSERT
34 PL

REFER TO
SECTION AU-AU

D3794-1
GASKET

D3793-1
WEARSHOE

AN3C5A BOLT
AN960C10L WASHER
34 PL

D3537-1
WEARPAD

D3791-1
WEARPLATE

D3536-25
GASKET

D3535-25
WEARSHOE

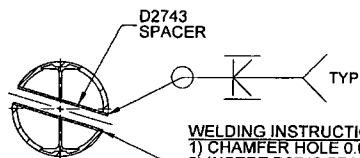
D3794-3
GASKET

D3793-3
WEARSHOE

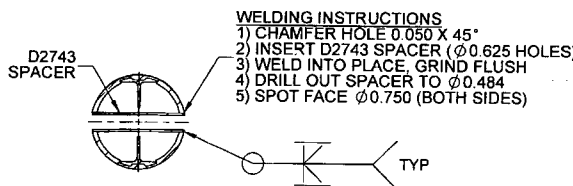
D3537-1
WEARPAD

AN8C35A BOLT
D3793-3 WEARSHOE, REF
D3794-3 GASKET, REF
SKIDTUBE, REF
D3488-041 BLADE FITTING, REF
D3794-3 GASKET, REF
D3793-3 WEARSHOE, REF
AN960C816L WASHER
MS21083C8 NUT
(INSTALL BOLT ON THIS SIDE)

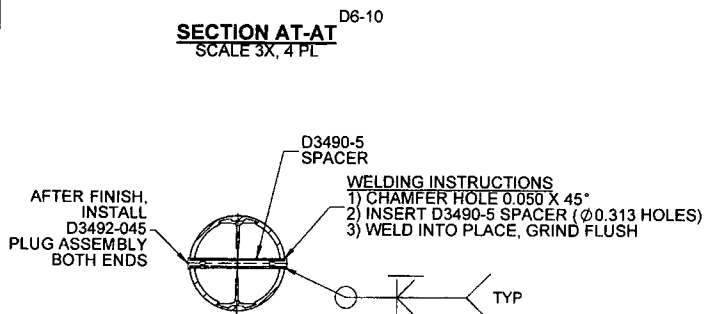
D2750-043 350 SKIDTUBE ASSEMBLY, LH



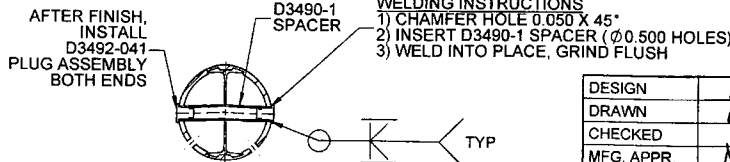
SECTION AT-AT SCALE 3X, 4 PL



SECTION AV-AV SCALE 3X, 4 PL (HARDWARE REMOVED FOR CLARITY)

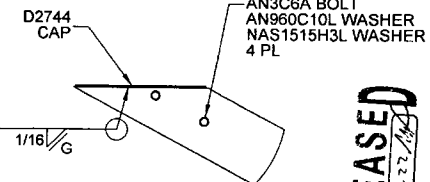


SECTION AU-AU SCALE 3X, 4 PL



SECTION AW-AW SCALE 3X, 4 PL

w/b 588B



DETAIL AS SCALE 2X

RELEASED
28 JUN 22 1994

DESIGN	AS	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
DRAWN	AS		
CHECKED	AS	DRAWING NO.	REV. F
MFG. APPR.	AS	D2750	SHEET 10 OF 11
APPROVED	AS	TITLE	SCALE
DE APPR.	AS	350 SKIDTUBE ASSEMBLY	NTS
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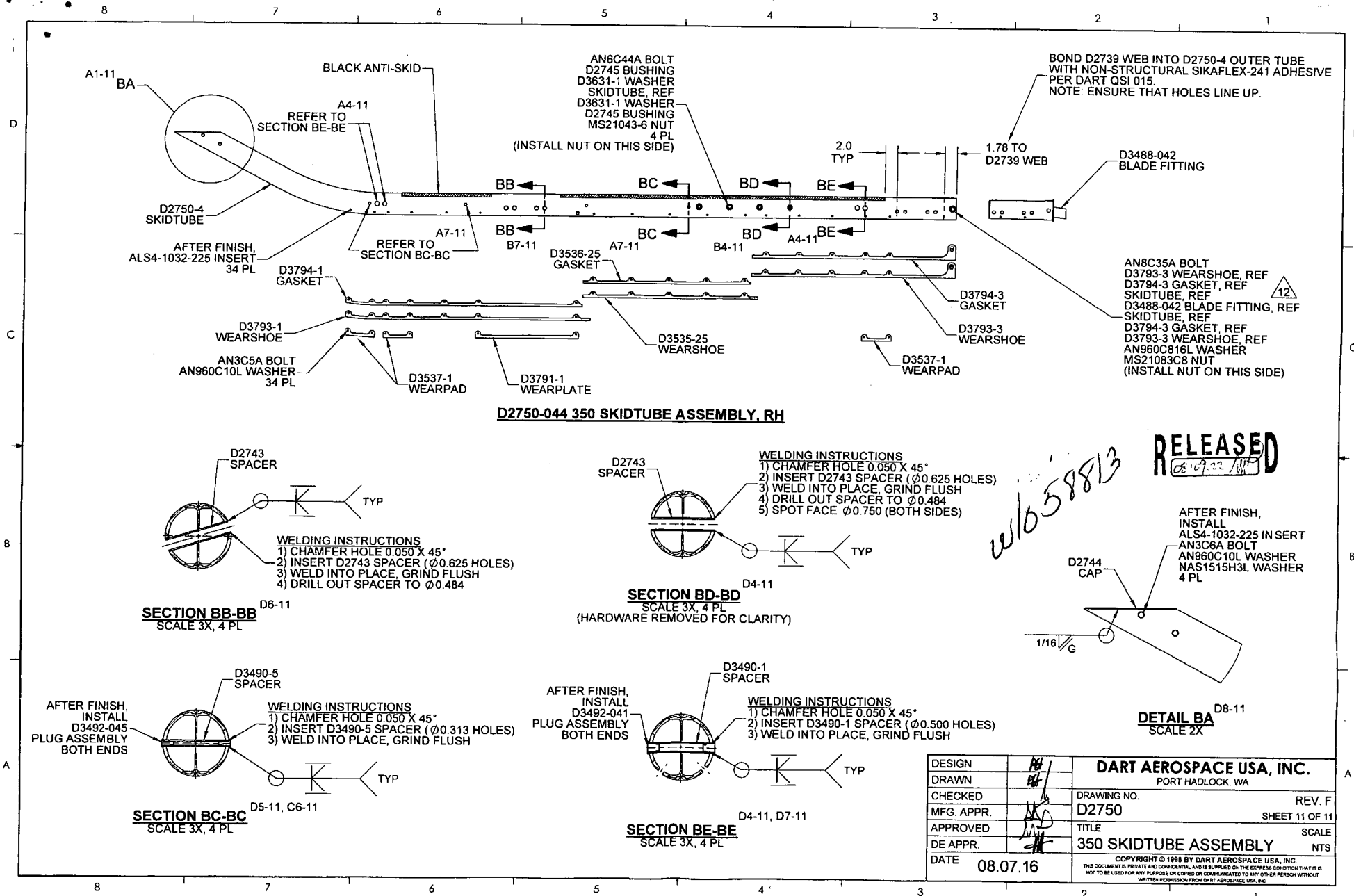
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 233

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barday Elliott
Job number: 58816
Part number: D350-626-014
Description: 350 skid tube
Welding Process: Tig[☒] Mig[]
Base material: Aluminium
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier Pat. Dunn Date of Test Coupon 10.06.01

Welder Barday Elliott Date of Test Coupon 10.06.01

The above named individual is qualified in accordance with AWS D17.1.2001 to weld